

Piercing Cloud Reversal

Expert Advisor Documentation

PLATFORM	TYPE	TIMEFRAME	WEBSITE
MetaTrader 5 (MT5)	Price-Action Reversal	H1 – H4	www.algotbot.live

⚠ Important Disclaimer This document is for educational and informational purposes only. It does not constitute financial or investment advice. Trading forex, CFDs, and other leveraged instruments involves substantial risk of loss and is not suitable for all investors. Past backtest performance does not guarantee future results. Never trade with capital you cannot afford to lose.

Overview

Piercing Cloud Reversal is a two-candle, price-action reversal Expert Advisor built around the classic **Piercing Line** (bullish) and **Dark Cloud Cover** (bearish) candlestick patterns. What separates it from a generic candlestick EA is that it only acts when the pattern forms as a **liquidity sweep** of a recent support or resistance level — the trigger candle first pushes past a swing extreme to grab stops, then closes back through the body of the prior candle, signalling that the move was absorbed and rejected.

The strategy works on a single timeframe and a single symbol. It evaluates only completed bars, holds at most one position at a time, and derives both its stop-loss and take-profit from current market volatility using the Average True Range (ATR). It is a discretionary-style reversal logic expressed entirely in rules, with no curve-fitted indicators stacked on top.

The defining trait. Unlike a full Engulfing pattern, the signal candle here reclaims only *past the midpoint* of the prior candle's body — at least 50% but strictly less than 100%. This *partial* reclaim is the signature of the Piercing / Dark-Cloud family and is what the EA checks for explicitly.

How It Works

Market Concept

The EA looks at two consecutive completed candles within the context of a recent price level:

- **Drive candle (c2)** — a strong candle that pushes decisively in one direction. Its body must be large enough relative to volatility to qualify as a genuine drive.
- **Signal candle (c1)** — the next candle, which extends *past a recent swing extreme* (sweeping the level / grabbing liquidity) but then closes back *through the midpoint of the drive candle's body*. This partial recovery — deliberately not a full engulf — signals absorption and rejection.

When the conditions align, the reversal is entered at market on the open of the following bar.

Support & Resistance Reference

Before each evaluation the EA scans a recent window of bars (the `LevelLookback` window, ending just before the signal candle) to find the lowest low (**support**) and the highest high (**resistance**). The signal candle is excluded from this window so the level is a genuine prior extreme that price can then sweep.

Entry — Bullish Piercing Line

A long is taken when **all** of the following hold:

- The drive candle **c2** is **bearish** (close below open).
- The drive body is large: $c2 \text{ body} \geq \text{MinBodyAtr} \times \text{ATR}$.
- The signal candle **c1 sweeps support**: its low prints below the recent support extreme.
- **c1 reclaims upward**: it closes back above the midpoint of c2's body.
- The reclaim is **partial**: c1's close stays below c2's open (not a full engulf).
- c1 itself is **bullish** (close above open).

Entry is sent at the current **Ask** as a market Buy.

Entry — Bearish Dark Cloud Cover

A short is taken under the mirror-image conditions:

- The drive candle **c2** is **bullish** (close above open).
- The drive body is large: $c2 \text{ body} \geq \text{MinBodyAtr} \times \text{ATR}$.
- The signal candle **c1 sweeps resistance**: its high prints above the recent resistance extreme.
- **c1 reclaims downward**: it closes back below the midpoint of c2's body.
- The reclaim is **partial**: c1's close stays above c2's open (not a full engulf).
- c1 itself is **bearish** (close below open).

Entry is sent at the current **Bid** as a market Sell.

Stop Loss & Take Profit

Risk is anchored to the signal candle and scaled by ATR:

- **Long stop** — placed below the signal candle's low: $SL = c1.Low - AtrStopMult \times ATR$.
- **Short stop** — placed above the signal candle's high: $SL = c1.High + AtrStopMult \times ATR$.
- **Take profit** — set at a fixed multiple of the measured risk: $TP = entry \pm RewardRisk \times risk$, where **risk** is the entry-to-stop distance.

A trade is only sent when the computed risk is strictly positive. In the MQL5 build both stop and target prices are normalised to the symbol's digit precision before submission.

Worked example (long)

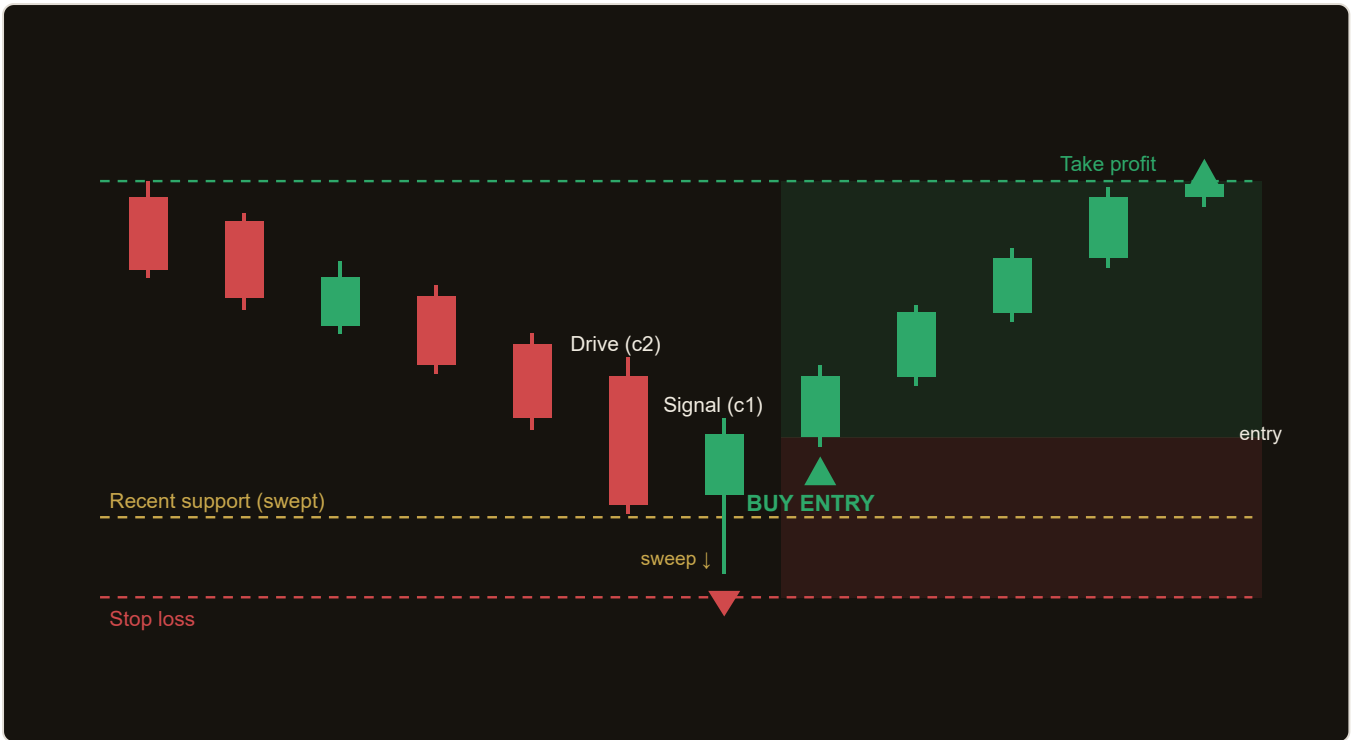
Suppose $ATR = 0.0020$, the swept support low gives $c1.Low = 1.10250$, and the entry Ask = 1.10400. With $AtrStopMult = 0.5$, the stop sits at $1.10250 - 0.5 \times 0.0020 = 1.10150$ — a risk of 25 pips. With $RewardRisk = 1.6$, the target is $1.10400 + 1.6 \times 0.00250 = 1.10800$, roughly 40 pips of reward.

Trade & Execution Management

- **One bar, one decision.** The EA acts only when a new bar completes; the forming bar is ignored until it closes.
- **One position at a time.** While a position tagged with this EA's magic number is open on the symbol, no new entries are taken.
- **Volatility warm-up.** The EA waits until enough history exists for the ATR period and the support/resistance window before evaluating any setup.
- **Position tagging.** Every order carries the **Magic** number (default **7421**) and a descriptive comment (**PiercingLine long** / **DarkCloud short**) so trades are easy to identify.

Strategy in Action

The illustration below shows an example of how the strategy identifies a setup and triggers its entry and exit. This is a simplified, illustrative example for educational purposes — not real market data.



Illustrative example only. Actual market behaviour varies. The signal candle sweeps support, closes back above the drive candle's midpoint (partial reclaim), and the long is entered on the next bar's open with an ATR-based stop and a reward:risk target.

Parameters

Parameter	Default	Description
Lots	0.10	Fixed trade volume in lots for every entry. Range 0.01–1.00, step 0.05.
AtrPeriod	14	Number of bars used to compute the Average True Range that scales the stop and the minimum drive-body filter. Range 7–28, step 1.
AtrStopMult	0.5	Multiple of ATR added beyond the signal candle's extreme to place the stop loss. Larger values give wider stops. Range 0.1–2.0, step 0.1.
RewardRisk	1.6	Take-profit distance expressed as a multiple of the measured entry-to-stop risk. Range 0.5–4.0, step 0.1.
LevelLookback	12	Number of bars (ending just before the signal candle) scanned to find the recent support and resistance extremes that must be swept. Range 5–40, step 1.
MinBodyAtr	0.5	Minimum size of the drive candle's body as a multiple of ATR, filtering out weak, indecisive drives. Range 0.1–2.0, step 0.1.
Magic	7421	Unique identifier used to tag and manage this EA's positions so they are not confused with other trades or other EAs.

Recommended Settings

The defaults are a balanced starting point. The following guidance helps adapt the EA to your instrument and risk appetite:

- **Timeframe:** H1 to H4 tends to produce the cleanest sweeps and the most reliable two-candle structures. Very low timeframes amplify noise and spread cost.
- **Instruments:** Liquid major FX pairs (e.g. EUR/USD, GBP/USD, USD/JPY) and major indices, where support/resistance levels are well respected and stop-hunts are common.
- **Reward:Risk:** The default `1.6` favours a higher hit-rate with a positive expectancy. Increase toward `2.0-2.5` for trend-friendly instruments; reduce toward `1.0-1.3` in choppy ranges.
- **Stop buffer:** Raise `AtrStopMult` on volatile symbols so the ATR buffer keeps the stop clear of normal wick noise.
- **Drive filter:** Raise `MinBodyAtr` to demand stronger drive candles (fewer but cleaner signals); lower it to trade more frequently.

Tip. Always validate any parameter set with the MT5 Strategy Tester on several years of quality tick data *before* trading live, and start on a demo account. Match the test symbol, timeframe, and spread model to your intended live conditions.

How to Install on MetaTrader 5

- 1 Copy `PiercingCloudReversal.ex5` to your MT5 `MQL5\Experts\` folder
- 2 Restart MetaTrader 5 and refresh the Navigator panel
- 3 Drag the EA onto a chart matching the recommended symbol and timeframe
- 4 Configure the input parameters and click **OK**
- 5 Enable **Algo Trading** in the MT5 toolbar

Risk Warning

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